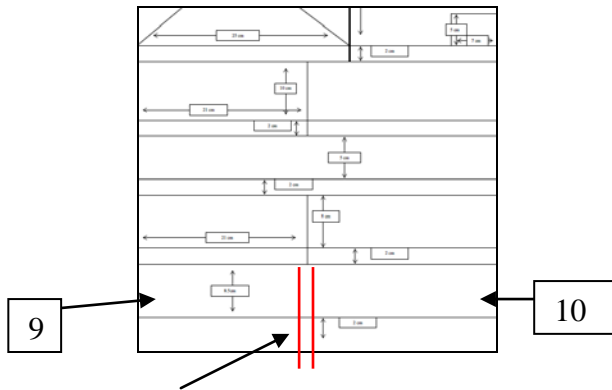


## ***Semester Map Insert 8 – Protein Synthesis (transporting the proteins) & Mitosis***



**Split the bottom two sections in half using two lines**

### **Protein Synthesis (transporting of proteins) Section 9 (Look back to Ch. 3)**

1. Draw the organelles on your semester map that are responsible for protein synthesis from the time the protein is created to the time it leaves the cell.
2. Name and define all the organelles involved in the movement of these proteins. In the definitions make sure to talk about how each organelle connects to one another.
3. In the space below the on the map, describe the picture of protein synthesis. Where does the energy come from in order to create the bond for proteins? What are the proteins used for? How does it relate to internal systems, the cells and ecology?

### **Mitosis Section 10**

1. Draw a detailed picture of the mitosis and the cell cycle.
2. Describe what occurs in each stage of the cell cycle?
3. Why does a cell need to divide?
4. How do the new cells compare to the original?
5. Explain how surface to volume ratio determines the efficiency of a cell. (Look back to Ch 3)
6. In the space below the picture describe how each of the sections above relate to mitosis. Where does the energy and materials come from to create a completely new cell?